

$\chi_{b0}(2P)$
 $I^G(JPC) = 0^+(0^{++})$
 J needs confirmation.

Observed in radiative decay of the $\Upsilon(3S)$, therefore $C = +$. Branching ratio requires E1 transition, M1 is strongly disfavored, therefore $P = +$.

 $\chi_{b0}(2P)$ MASS

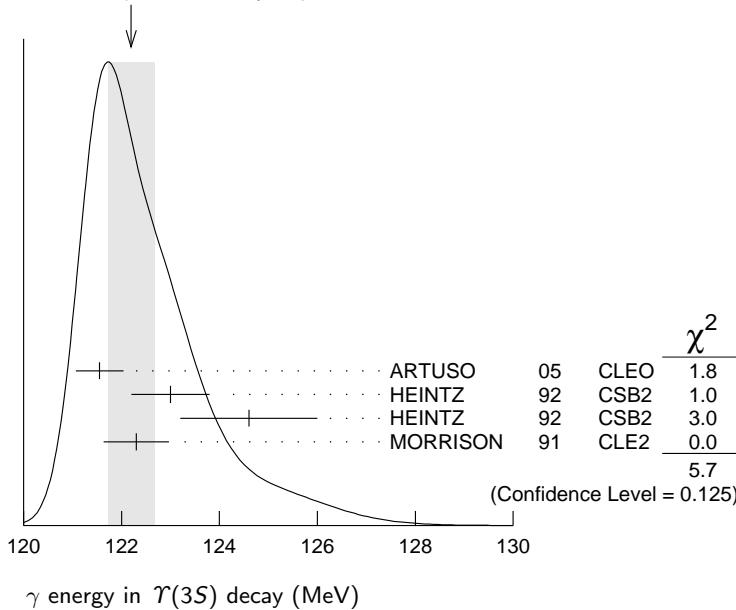
VALUE (MeV)	DOCUMENT ID
10232.5 ± 0.4 ± 0.5 OUR EVALUATION	From γ energy below, using $\Upsilon(3S)$ mass = 10355.2 ± 0.5 MeV [10.2325 ± 0.0004 ± 0.0005 GeV OUR 2012 EVALUATION]

 γ ENERGY IN $\Upsilon(3S)$ DECAY

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
121.9 ± 0.4 OUR EVALUATION	Treating systematic errors as correlated			
122.2 ± 0.5 OUR AVERAGE	Error includes scale factor of 1.4. See the ideogram below.			
121.55 ± 0.16 ± 0.46	ARTUSO	05	CLEO	$\Upsilon(3S) \rightarrow \gamma X$
123.0 ± 0.8	4959	1 HEINTZ	92	$e^+ e^- \rightarrow \gamma X$
124.6 ± 1.4	17	2 HEINTZ	92	$e^+ e^- \rightarrow \ell^+ \ell^- \gamma\gamma$
122.3 ± 0.3 ± 0.6	9903	MORRISON	91	$e^+ e^- \rightarrow \gamma X$

¹A systematic uncertainty on the energy scale of 0.9% not included. Supersedes NARAIN 91.
²A systematic uncertainty on the energy scale of 0.9% not included. Supersedes HEINTZ 91.

WEIGHTED AVERAGE
 122.2 ± 0.5 (Error scaled by 1.4)



γ energy in $\Upsilon(3S)$ decay (MeV)

 $\chi_{b0}(2P)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)	Confidence level
$\Gamma_1 \gamma \Upsilon(2S)$	(4.6 ± 2.1) %	
$\Gamma_2 \gamma \Upsilon(1S)$	(9 ± 6) × 10 ⁻³	
$\Gamma_3 D^0 X$	< 8.2 %	90%
$\Gamma_4 \pi^+ \pi^- K^+ K^- \pi^0$	< 3.4 × 10 ⁻⁵	90%
$\Gamma_5 2\pi^+ \pi^- K^- K_S^0$	< 5 × 10 ⁻⁵	90%
$\Gamma_6 2\pi^+ \pi^- K^- K_S^0 2\pi^0$	< 2.2 × 10 ⁻⁴	90%
$\Gamma_7 2\pi^+ 2\pi^- 2\pi^0$	< 2.4 × 10 ⁻⁴	90%
$\Gamma_8 2\pi^+ 2\pi^- K^+ K^-$	< 1.5 × 10 ⁻⁴	90%

NODE=M079215;NODE=M079

NODE=M079

NODE=M079M

NEW;→ UNCHECKED ←

NODE=M079DM

NODE=M079DM

→ UNCHECKED ←

OCCUR=2

NODE=M079DM;LINKAGE=A

NODE=M079DM;LINKAGE=B

DESIG=2

DESIG=1

DESIG=3

DESIG=4

DESIG=5

DESIG=6

DESIG=7

DESIG=8

Γ_9	$2\pi^+ 2\pi^- K^+ K^- \pi^0$	< 2.2	$\times 10^{-4}$	90%	DESIG=9
Γ_{10}	$2\pi^+ 2\pi^- K^+ K^- 2\pi^0$	< 1.1	$\times 10^{-3}$	90%	DESIG=10
Γ_{11}	$3\pi^+ 2\pi^- K^- K_S^0 \pi^0$	< 7	$\times 10^{-4}$	90%	DESIG=11
Γ_{12}	$3\pi^+ 3\pi^-$	< 7	$\times 10^{-5}$	90%	DESIG=12
Γ_{13}	$3\pi^+ 3\pi^- 2\pi^0$	< 1.2	$\times 10^{-3}$	90%	DESIG=13
Γ_{14}	$3\pi^+ 3\pi^- K^+ K^-$	< 1.5	$\times 10^{-4}$	90%	DESIG=14
Γ_{15}	$3\pi^+ 3\pi^- K^+ K^- \pi^0$	< 7	$\times 10^{-4}$	90%	DESIG=15
Γ_{16}	$4\pi^+ 4\pi^-$	< 1.7	$\times 10^{-4}$	90%	DESIG=16
Γ_{17}	$4\pi^+ 4\pi^- 2\pi^0$	< 6	$\times 10^{-4}$	90%	DESIG=17

$\chi_{b0}(2P)$ BRANCHING RATIOS

$\Gamma(\gamma \Upsilon(2S))/\Gamma_{\text{total}}$

VALUE	CL%	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
0.046 ± 0.020 ± 0.007		3 HEINTZ	92 CSB2	$e^+ e^- \rightarrow \ell^+ \ell^- \gamma\gamma$	

• • • We do not use the following data for averages, fits, limits, etc. • • •

<0.028	90	4 LEES	11J BABR	$\Upsilon(3S) \rightarrow X\gamma$
<0.089	90	5 CRAWFORD	92B CLE2	$e^+ e^- \rightarrow \ell^+ \ell^- \gamma\gamma$

³ Using $B(\Upsilon(2S) \rightarrow \mu^+ \mu^-) = (1.44 \pm 0.10)\%$, $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = (6.0 \pm 0.4 \pm 0.6)\%$ and assuming $e\mu$ universality. Supersedes HEINTZ 91.

⁴ LEES 11J quotes a central value of $\Gamma(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(2S))/\Gamma_{\text{total}} \times \Gamma(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))/\Gamma_{\text{total}} = (-0.3 \pm 0.2^{+0.5}_{-0.4})\%$.

⁵ Using $B(\Upsilon(2S) \rightarrow \mu^+ \mu^-) = (1.37 \pm 0.26)\%$, $B(\Upsilon(3S) \rightarrow \gamma\gamma \Upsilon(2S)) \times 2 B(\Upsilon(2S) \rightarrow \mu^+ \mu^-) < 1.19 \times 10^{-4}$, and $B(\Upsilon(3S) \rightarrow \chi_{b0}(2P)\gamma) = 0.049$.

$\Gamma(\gamma \Upsilon(1S))/\Gamma_{\text{total}}$

VALUE	CL%	DOCUMENT ID	TECN	COMMENT	Γ_2/Γ
0.009 ± 0.006 ± 0.001		6 HEINTZ	92 CSB2	$e^+ e^- \rightarrow \ell^+ \ell^- \gamma\gamma$	

• • • We do not use the following data for averages, fits, limits, etc. • • •

<0.012	90	7 LEES	11J BABR	$\Upsilon(3S) \rightarrow X\gamma$
<0.025	90	8 CRAWFORD	92B CLE2	$e^+ e^- \rightarrow \ell^+ \ell^- \gamma\gamma$

⁶ Using $B(\Upsilon(1S) \rightarrow \mu^+ \mu^-) = (2.57 \pm 0.07)\%$, $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = (6.0 \pm 0.4 \pm 0.6)\%$ and assuming $e\mu$ universality. Supersedes HEINTZ 91.

⁷ LEES 11J quotes a central value of $\Gamma(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(1S))/\Gamma_{\text{total}} \times \Gamma(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))/\Gamma_{\text{total}} = (3.9 \pm 2.2^{+1.2}_{-0.6}) \times 10^{-4}$.

⁸ Using $B(\Upsilon(1S) \rightarrow \mu^+ \mu^-) = (2.57 \pm 0.07)\%$, $B(\Upsilon(3S) \rightarrow \gamma\gamma \Upsilon(1S)) \times 2 B(\Upsilon(1S) \rightarrow \mu^+ \mu^-) < 0.63 \times 10^{-4}$, and $B(\Upsilon(3S) \rightarrow \chi_{b0}(2P)\gamma) = 0.049$.

$\Gamma(D^0 X)/\Gamma_{\text{total}}$

VALUE	CL%	DOCUMENT ID	TECN	COMMENT	Γ_3/Γ
<8.2 × 10⁻²	90	9,10 BRIERE	08 CLEO	$\Upsilon(3S) \rightarrow \gamma D^0 X$	

⁹ For $p_{D^0} > 2.5$ GeV/c.

¹⁰ The authors also present their result as $(4.1 \pm 3.0 \pm 0.4) \times 10^{-2}$.

$\Gamma(\pi^+ \pi^- K^+ K^- \pi^0)/\Gamma_{\text{total}}$

VALUE (units 10 ⁻⁴)	CL%	DOCUMENT ID	TECN	COMMENT	Γ_4/Γ
<0.34	90	11 ASNER	08A CLEO	$\Upsilon(3S) \rightarrow \gamma \pi^+ \pi^- K^+ K^- \pi^0$	

¹¹ ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow \pi^+ \pi^- K^+ K^- \pi^0)/\Gamma_{\text{total}}] \times [B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))] < 2 \times 10^{-6}$ which we divide by our best value $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.

$\Gamma(2\pi^+ \pi^- K^- K_S^0)/\Gamma_{\text{total}}$

VALUE (units 10 ⁻⁴)	CL%	DOCUMENT ID	TECN	COMMENT	Γ_5/Γ
<0.5	90	12 ASNER	08A CLEO	$\Upsilon(3S) \rightarrow \gamma 2\pi^+ \pi^- K^- K_S^0$	

¹² ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 2\pi^+ \pi^- K^- K_S^0)/\Gamma_{\text{total}}] \times [B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))] < 3 \times 10^{-6}$ which we divide by our best value $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.

NODE=M079220

NODE=M079R2

NODE=M079R2

NODE=M079R2;LINKAGE=C

NODE=M079R2;LINKAGE=LE

NODE=M079R2;LINKAGE=B

NODE=M079R1

NODE=M079R1

NODE=M079R1;LINKAGE=C

NODE=M079R1;LINKAGE=LE

NODE=M079R1;LINKAGE=B

NODE=M079R01

NODE=M079R01

NODE=M079R01;LINKAGE=BR

NODE=M079R01;LINKAGE=RI

NODE=M079R02

NODE=M079R02

NODE=M079R02;LINKAGE=AS

NODE=M079R03

NODE=M079R03

NODE=M079R03;LINKAGE=AS

$\Gamma(2\pi^+ \pi^- K^- K_S^0 2\pi^0)/\Gamma_{\text{total}}$					Γ_6/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<2.2	90	13 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 2\pi^+ \pi^- K^- 2\pi^0$	
13 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 2\pi^+ \pi^- K^- K_S^0 2\pi^0)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 13 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R04
NODE=M079R04

NODE=M079R04;LINKAGE=AS

$\Gamma(2\pi^+ 2\pi^- 2\pi^0)/\Gamma_{\text{total}}$					Γ_7/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<2.4	90	14 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 2\pi^+ 2\pi^- 2\pi^0$	
14 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 2\pi^+ 2\pi^- 2\pi^0)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 14 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R05
NODE=M079R05

NODE=M079R05;LINKAGE=AS

$\Gamma(2\pi^+ 2\pi^- K^+ K^-)/\Gamma_{\text{total}}$					Γ_8/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<1.5	90	15 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 2\pi^+ 2\pi^- K^+ K^-$	
15 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 2\pi^+ 2\pi^- K^+ K^-)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 9 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R06
NODE=M079R06

NODE=M079R06;LINKAGE=AS

$\Gamma(2\pi^+ 2\pi^- K^+ K^- \pi^0)/\Gamma_{\text{total}}$					Γ_9/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<2.2	90	16 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 2\pi^+ 2\pi^- K^+ K^- \pi^0$	
16 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 2\pi^+ 2\pi^- K^+ K^- \pi^0)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 13 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R07
NODE=M079R07

NODE=M079R07;LINKAGE=AS

$\Gamma(2\pi^+ 2\pi^- K^+ K^- 2\pi^0)/\Gamma_{\text{total}}$					Γ_{10}/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<11	90	17 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 2\pi^+ 2\pi^- K^+ K^- 2\pi^0$	
17 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 2\pi^+ 2\pi^- K^+ K^- 2\pi^0)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 63 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R08
NODE=M079R08

NODE=M079R08;LINKAGE=AS

$\Gamma(3\pi^+ 2\pi^- K^- K_S^0 \pi^0)/\Gamma_{\text{total}}$					Γ_{11}/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<7	90	18 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 3\pi^+ 2\pi^- K^- K_S^0 \pi^0$	
18 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 3\pi^+ 2\pi^- K^- K_S^0 \pi^0)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 39 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R09
NODE=M079R09

NODE=M079R09;LINKAGE=AS

$\Gamma(3\pi^+ 3\pi^-)/\Gamma_{\text{total}}$					Γ_{12}/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<0.7	90	19 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 3\pi^+ 3\pi^-$	
19 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 3\pi^+ 3\pi^-)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 4 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R10
NODE=M079R10

NODE=M079R10;LINKAGE=AS

$\Gamma(3\pi^+ 3\pi^- 2\pi^0)/\Gamma_{\text{total}}$					Γ_{13}/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<12	90	20 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 3\pi^+ 3\pi^- 2\pi^0$	
20 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 3\pi^+ 3\pi^- 2\pi^0)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 72 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R11
NODE=M079R11

NODE=M079R11;LINKAGE=AS

$\Gamma(3\pi^+ 3\pi^- K^+ K^-)/\Gamma_{\text{total}}$					Γ_{14}/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<1.5	90	21 ASNER	08A CLEO	$\Gamma(3S) \rightarrow \gamma 3\pi^+ 3\pi^- K^+ K^-$	
21 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 3\pi^+ 3\pi^- K^+ K^-)/\Gamma_{\text{total}}] \times [B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P))] < 9 \times 10^{-6}$ which we divide by our best value $B(\Gamma(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.					

NODE=M079R12
NODE=M079R12

NODE=M079R12;LINKAGE=AS

$\Gamma(3\pi^+ 3\pi^- K^+ K^- \pi^0)/\Gamma_{\text{total}}$

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<7	90	22 ASNER	08A CLEO	$\Upsilon(3S) \rightarrow \gamma 3\pi^+ 3\pi^- K^+ K^- \pi^0$
22 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 3\pi^+ 3\pi^- K^+ K^- \pi^0)/\Gamma_{\text{total}}] \times [B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))] < 43 \times 10^{-6}$ which we divide by our best value $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.				

 Γ_{15}/Γ NODE=M079R13
NODE=M079R13 $\Gamma(4\pi^+ 4\pi^-)/\Gamma_{\text{total}}$

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<1.7	90	23 ASNER	08A CLEO	$\Upsilon(3S) \rightarrow \gamma 4\pi^+ 4\pi^-$
23 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 4\pi^+ 4\pi^-)/\Gamma_{\text{total}}] \times [B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))] < 10 \times 10^{-6}$ which we divide by our best value $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.				

 Γ_{16}/Γ NODE=M079R14
NODE=M079R14 $\Gamma(4\pi^+ 4\pi^- 2\pi^0)/\Gamma_{\text{total}}$

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<6	90	24 ASNER	08A CLEO	$\Upsilon(3S) \rightarrow \gamma 4\pi^+ 4\pi^- 2\pi^0$
24 ASNER 08A reports $[\Gamma(\chi_{b0}(2P) \rightarrow 4\pi^+ 4\pi^- 2\pi^0)/\Gamma_{\text{total}}] \times [B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))] < 38 \times 10^{-6}$ which we divide by our best value $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = 5.9 \times 10^{-2}$.				

 Γ_{17}/Γ NODE=M079R15
NODE=M079R15

$$\Gamma(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(1S))/\Gamma_{\text{total}} \times \Gamma(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))/\Gamma_{\text{total}}$$

$$\Gamma_2/\Gamma \times \frac{\Gamma(3S)}{\Gamma_{21}} / \Gamma^{3S}$$

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<8.2	90	25 LEES	11J BABR	$\Upsilon(3S) \rightarrow X\gamma$
25 LEES 11J quotes a central value of $\Gamma(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(1S))/\Gamma_{\text{total}} \times \Gamma(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))/\Gamma_{\text{total}} = (3.9 \pm 2.2^{+1.2}_{-0.6}) \times 10^{-4}$ and derives a 90% CL upper limit of $B(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(1S)) < 1.2\%$ using $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = (5.9 \pm 0.6)\%$.				

NODE=M079B01
NODE=M079B01

$$\Gamma(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(2S))/\Gamma_{\text{total}} \times \Gamma(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))/\Gamma_{\text{total}}$$

$$\Gamma_1/\Gamma \times \frac{\Gamma(3S)}{\Gamma_{21}} / \Gamma^{3S}$$

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<1.6	90	26 LEES	11J BABR	$\Upsilon(3S) \rightarrow X\gamma$
26 LEES 11J quotes a central value of $\Gamma(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(2S))/\Gamma_{\text{total}} \times \Gamma(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P))/\Gamma_{\text{total}} = (-0.3 \pm 0.2^{+0.5}_{-0.4})\%$ and derives a 90% CL upper limit of $B(\chi_{b0}(2P) \rightarrow \gamma \Upsilon(2S)) < 2.8\%$ using $B(\Upsilon(3S) \rightarrow \gamma \chi_{b0}(2P)) = (5.9 \pm 0.6)\%$.				

NODE=M079B02
NODE=M079B02 $\chi_{b0}(2P)$ REFERENCES

LEES	11J	PR D84 072002	J.P. Lees <i>et al.</i>	(BABAR Collab.)
ASNER	08A	PR D78 091103	D.M. Asner <i>et al.</i>	(CLEO Collab.)
BRIERE	08	PR D78 092007	R.A. Briere <i>et al.</i>	(CLEO Collab.)
ARTUSO	05	PRL 94 032001	M. Artuso <i>et al.</i>	(CLEO Collab.)
CRAWFORD	92B	PL B294 139	G. Crawford, R. Fulton	(CLEO Collab.)
HEINTZ	92	PR D46 1928	U. Heintz <i>et al.</i>	(CUSB II Collab.)
HEINTZ	91	PRL 66 1563	U. Heintz <i>et al.</i>	(CUSB Collab.)
MORRISON	91	PRL 67 1696	R.J. Morrison <i>et al.</i>	(CLEO Collab.)
NARAIN	91	PRL 66 3113	M. Narain <i>et al.</i>	(CUSB Collab.)

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REFID=53936
REFID=52574
REFID=52577
REFID=50454
REFID=43177
REFID=43604
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